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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,022	09/21/2001	Thomas A. Gregg	POU920010099US1	7032

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EXAMINER

KNAPP, JUSTIN R

ART UNIT

PAPER NUMBER

2182

DATE MAILED: 07/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/960,022

Applicant(s)

GREGG ET AL.

Examiner

Justin Knapp

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: the word, "Providing" on line 3, should not be capitalized. Appropriate correction is required.
2. Claims 5 and 7 are objected to because of the following informalities: they are dependent on themselves. It appears both claims are dependent on claim 1 and will be treated as so. Appropriate correction is required.
3. Claim 6 is objected to because of the following informalities: the word, "comparability" on line 42, should be spelled, - - compatibility - - . Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 2, and 5-8 are rejected under 35 U.S.C. 112, second paragraph.
6. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are:

Lines 7-10 claim, "an old compatibility mode operating through a converter to multiple sender and/or receiver channels connected at the opposite end of the converter sink ports". There is no step in the claimed method to show how the old compatibility mode works with the claimed I/O channel.

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7. Regarding claim 2, the phrase "concurrently as possible" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "as possible"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

8. Claim 5 recites the limitation "the source" in line 35-36. There is insufficient antecedent basis for this limitation in the claim.

9. Claims 6-8 recite the limitation "the software" in lines 43, 48, and 54. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Robertson, US 2001/0047441.

12. Referring to claim 1, Robertson teaches a method for operating an I/O channel of a computer system, comprising the steps of:

providing a plurality of modes including:

a new high function mode operating as a new peer mode with respect to its attached channel at the opposite end of a link; and

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an old compatibility mode operating through a converter to multiple sender and/or receiver channels connected at the opposite end of the converter sink ports, and operating the channel when said new peer mode is directly connected to another identical channel operating in the same said new peer mode.

Using Figure 2 for reference, PC, element 5, is capable of communicating in one mode (a “high function” mode) using its USB channel to an opposite end of a link with another USB channel, element 32. PC, element 5, also is capable of communicating in another mode (an “old compatibility” mode) with older systems through a converter, element 22. One such example, is PC, 5, sends data through it’s USB channel, through the converter which converts the data to one of it’s sink ports that is attached to a RS232 channel. The channel operates in the “high function mode” when it is connected with another USB channel (see figure 2 and sections [0037] through [0049]).

13. Referring to claim 2, Robertson teaches wherein the channel operating in the new peer mode uses all of its message passing resources to exchange the maximum number of messages concurrently as possible. It would be inherent that the speed between two channels would attempt to operate as fast as its specifications allow it to.

14. Referring to claim 3, Robertson teaches wherein the channel operates in a second old compatibility mode and is attached to a converter that allows further attachment to a plurality of older system’s channels. As taught herein above, a old compatibility mode is attached to converter (figure 2, element 22) that allows further attachment to older system channels (elements A, D-G).

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15. Referring to claim 4, Robertson teaches wherein the channel operating in said second old compatibility mode divides its message passing resources among the multiple sink ports of said converter. It would be inherent that the USB channel of PC, 5, would have to divide its message passing resources amongst the various ports of converter, 22.

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

17. Claims 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robertson.

18. Referring to claim 5, Robertson does not explicitly teach wherein said converter comprises the functions:

keeps no state information;

adjusts differences in line speeds between the source and sink ports;

routes outbound packets to the correct sink port; and

adds source information to inbound packets.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include those functions within the converter of Robertson as it must have those functions in order to operate correctly.

19. Referring to claims 6-8, Robertson does not explicitly teach wherein the channel operating in said old compatibility mode appears to the software as a plurality of independent

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channels operating in the old mode, wherein the channel operating in the old compatibility mode processes commands from the software giving the illusion of multiple separate old channels, or wherein the channel operating in the old compatibility mode presents interruption, busy, state, and error information to the software giving the illusion of having a plurality of separate channels operating in the old mode. Robertson does teach the use of software to control data transmissions (see figure 6).

It would have been obvious to one skilled in the art at the time the invention was made to implement the software functions above as it would have been apparent that various modifications and adaptations of the method and system of Robertson would be possible without departing from the scope of Robertson's invention.

20. Referring to claim 9, Robertson does not explicitly teach wherein the channel operating in the old compatibility mode provides a plurality of independent sequence numbers, one pair for each converter sink port. However, official notice is taken that it is well known in the art to utilize sequence numbers when sending packets of data from one channel to another channel for the purposes of tracking the successful transmission of data.

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Applicant is reminded that in amending in response to a rejection of claims, the patentable novelty must be clearly shown in view of the state of the art disclosed by the references cited and the objections made. Applicant must also show how the amendments avoid such references and objections.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Knapp whose telephone number is (703) 308-6132. The examiner can normally be reached on Mon - Fri 9 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on (703) 308-3301. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Justin Knapp
Examiner
Art Unit 2182

July 28, 2004


JEFFREY GAFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100